Kinship and social networks: A regional analysis of sibling relations in twentieth-century Netherlands

Bras, H.; van Tilburg, T.G.

published in
Journal of Family History
2007

DOI (link to publisher)
10.1177/0363199007300244

document version
Publisher's PDF, also known as Version of record

Kinship and Social Networks: A Regional Analysis of Sibling Relations in Twentieth-Century Netherlands

Hilde Bras and Theo van Tilburg

Journal of Family History 2007 32: 296
DOI: 10.1177/0363199007300244

KINSHIP AND SOCIAL NETWORKS: A REGIONAL ANALYSIS OF SIBLING RELATIONS IN TWENTIETH-CENTURY NETHERLANDS

Hilde Bras
Theo van Tilburg

Given the paucity of information on historical kin relations, this study uses survey data in order to investigate how different family forms influenced the size and composition of social networks and the relationships among elderly siblings born in farming families between 1903 and 1937 in three regions of the Netherlands. In the area with stem families, impartible inheritance, and a custom of neighbor help, social networks are largest and contain the most siblings. Multilevel analyses show that even when controlling for other factors, this particular family form positively affects contact frequency in sibling relationships. Our results not only show the persistence of differential kinship values, but since respondents' networks were linked back to their families of socialization in the early twentieth century, findings also reflect regional disparities in kin relations in the past.

Keywords: *kinship; social networks; sibling relations; family forms; inheritance practices; the Netherlands; twentieth century; mixed methods*

Over the past few decades, it has been noted time and again that there is a paucity of information on the relations among non-coresident kin in the past, that is, ties among parents and non-coresident children, among siblings living in separate households, among aunts, uncles, nieces, nephews and affines, to name just a few.[1] The question

---

Hilde Bras *is an assistant professor in the Social Research Methodology Department of the Vrije Universiteit Amsterdam. Her research interests are in the fields of historical demography, family history and life-course studies. The present article is part of an ongoing research project on the relations, diversity, and interdependence in the life courses of brothers and sisters during the nineteenth and twentieth centuries. Together with Muriel Neven, Bras recently published an article in* Population Studies *(61:1, 2007) on the influence of siblings on women's migration chances, titled "The effects of siblings on the migration of women in two rural areas of Belgium and the Netherlands, 1829-1940." Dr. Bras's current research is concerned with kin marriage, and with the effects of kin on mortality.*

Theo van Tilburg *is a professor of Social Gerontology at the Vrije Universiteit Amsterdam. He is director of the research program "Social context of aging" and affiliated to the Longitudinal Aging Study Amsterdam. His research interests include the effects of personal network characteristics and social support on well-being and life-course developments in personal networks, related to deteriorating health and role loss. Recently he has published on loneliness in* Research on Aging, *on meaning in life in the* Journal of Gerontology *and on network changes after divorce in* Social Networks.

Journal of Family History, Vol. 32 No. 3, July 2007 296-322
DOI: 10.1177/0363199007300244

of why this caveat exists can be answered quite simply. Clearly, there is a lack of systematic and comparable source material indicating which kinfolk interacted, how much contact existed, whether and to what extent support was exchanged, not only in times of crisis, but also in daily lived reality. Letters, diaries, and other personal documents are excellent sources to come to grips with these questions in a historical context. Family historians are increasingly using them to produce refined analyses of kin relations, and this is a road that certainly can be further pursued.[2] Nevertheless, personal documents are only available for certain families in certain social groups.

Although some recent studies have started to explore kin networks outside the household,[3] the large-scale existence of household lists in vital registers of various kinds within different regions and countries has led most family demographers to focus on the composition of household units. Charting "who lived with whom" became the answer to the question of how people related to each other in the past. Thus, while the study of household composition has come to fruition, the historical study of kinship and kin ties has hardly begun. As a consequence, not only methodological approaches for studying historical kin relations, but also theoretical ideas about what constituted kinship and how kinship structured kin relations in the past have remained underdeveloped.

While historians have left the issue of kinship relatively untouched, anthropologists and sociologists have witnessed a resurgence of kinship studies during the last ten years. Central to the study of anthropology from the beginning, kinship was initially seen as a given, as a natural fact, and the goal of much anthropological work was to compare kinship structures across cultures. Since the 1990s, under the influence of contradictory findings from non-western societies, the development of gene technology, and novel patterns of family formation in late modernity, the idea of the inherent quality or naturalness of kinship came under attack. Anthropological studies of kinship shifted from formalized comparative investigations of genealogical ties to studies concerned with the cultural meanings of kinship, and with how kinship, or better relatedness, is constructed and functions in various contexts.[4] Kinship is no longer seen as an ordering principle, but conceptualized as a category. As such, kinship, together with other structural elements, shapes behavior; it impacts on behavior as one set of beliefs, besides other sets of beliefs, values, attributes, and concrete circumstances.[5]

In sociology as well, the study of kin relations has regained prominence as of late. Kinship is not studied anymore as an end in itself, as was the case in the British kinship studies of the 1950s and 1960s,[6] but as one type of tie among other kinds of relationships. Kin is conceptualized and investigated as part of personal social networks. The social network approach, which features centrally in this burgeoning field, starts with the proposition that actors in social systems are interdependent and that their relations channel information, affection, and other resources. The structure of those relations restricts and creates opportunities for behavior. The pattern of these relations rather than characteristics of individual actors define social structure.[7] Two directions are usually taken: either the whole network is investigated or egocentric networks (personal communities) are mapped out. In the latter case, all persons with whom individuals actively engage are charted and kinship relations are situated within broader sets of informal ties. Moreover, the quality of ties, in the sense of contact and exchange of support among network actors, is investigated.

Both recent anthropological notions of kinship and the social network approach can invigorate the historical study of kinship and kin relations in important ways,[8] not only theoretically and methodologically, but also by molding the kinds of questions we ask about kinship. Viewing kinship as a category invites comparative research, exploring ways in which kinship differed among localities, regions, social groups, and time periods, and how it influenced social relations and social and demographic behavior. Studying relations among kin from a network perspective, avoids treating them a priori as a set of ties endowed with unique qualities, but rather contests the nature of kin ties and contextualizes them within broader systems of social support and sociability.[9] The purpose of this article is to start exploring the historical kinship domain from these new angles. How did different notions of kinship influence personal social networks and strength of relationships?

We start from the premise that kinship is a cultural construct, a value system concerning relatedness, comprising the underlying principles that govern people's behavior and give substance to their interpersonal relationships.[10] Kinship value systems are variable; people conceive kinship in different ways and attribute different meanings to it in different cultures. Particularly, we assume that kinship value systems vary between culturally specific family forms. Family forms, which can be thought of as culturally solidified household patterns, are founded on three coordinates: rules of inheritance, the extent of patri- or neolocality at marriage, and the duration until children leave the parental home (for marriage or service). Family forms are, in turn, related to the extent and content of people's strong ties (with household members, kin, and neighbors) and weak ties (with friends and other non-kin).

Because of the existence of property and the continuing importance of traditional customs of inheritance, in this article we focus on the social networks of persons born and raised in farming families. Our analysis is based on a survey that comprises both retrospective life history data and cross-sectional social network data of persons born in farming families between 1903 and 1937, who were interviewed in 1992. They live(d) in three regions of the Netherlands differing in inheritance customs, age at marriage, and the extent of neo- and patrilocality. We thus investigate whether and how different regional notions of kinship, related to specific family forms, affect the social networks of early twentieth-century-born farmers' offspring at the end of the twentieth century. We thereby specifically focus on the relationships of these aged persons with their siblings. The sibling tie constitutes a primary relationship among aged peers, which is—especially in farming families—highly affected by prevalent notions of property and kinship.

We approach our problem by a two-step, mixed-methods research strategy, combining ethnographies and qualitative historical materials with quantitative survey data.[11] This method combines an inductive, descriptive phase with a deductive and hypothesis-testing one. First of all, ethnographies and historical materials have been studied in order to probe deeper into the concrete land transfer practices and cultural patterns of farmers in the three regions in the Netherlands. These customs are described within their regional economic and demographic context. Subsequently, on the basis of these descriptions, hypotheses regarding social networks and the quality of relations among adult/elderly siblings are formulated. We test these hypotheses on a survey data set, which allows us not only to compare the composition of social networks across regions, but also to assess the effect

of regional kinship values on the strength of sibling ties, while controlling for a whole range of other socioeconomic and demographic factors that might explain regional variation too.

BACKGROUND

Kinship and Social Networks: Theory and Previous Findings

Building on a typology first developed by Frederic Le Play in the late nineteenth century, Emmanuel Todd has distinguished four "ideal" family forms. These family types are founded on the specific combination of inheritance practices, and the speed and extent of the leaving home process, such as becomes apparent in age at marriage and residence at marriage (patri- or neolocality). These in turn result in particular parent–child relations, sibling bonds, and conjugal ties. The rules of inheritance have a primary influence on the nature of sibling ties. These might vary between equality, in case inheritance is fully partible, and inequality, when property is passed on to just one child. The speed and extent of leaving home is connected to parent–child ties, which may vary between loose (liberal) ties when children depart early and close (authoritarian) ties when the separation process is stretched out or does not occur. Todd maps these types geographically within clearly observable, often centuries old, boundaries. They predominate in well circumscribed regions, and have been in place for a long time.[12]

In areas with impartible inheritance, where all property is passed on to just one heir, links between the generations are said to be close. The heir is destined to receive the farm and the land and perpetuate the family line. The bond between the father and the inheriting son conforms to an authoritarian model of family relations. While the heir settles patrilocally, the other siblings must leave the family group or, if they stay, are constrained to remain celibate. Thus, fraternal relations embody the ideal of inequality. Todd characterizes this family model as authoritarian–inegalitarian (defined as stem family by Le Play).

In partible inheritance societies, all children inherit the same; thus, sibling relationships have been described as egalitarian. A rapid separation of parents and children is a central element in many partible inheritance societies. Children leave their parents after adolescence in order to form independent nuclear households through marriage. The parent–child relationship can thus be characterized as liberal, emphasizing the independence between parents and children (the nuclear family type). In reality however, in partible inheritance areas, two different family types occur, depending on the extent to which the father can freely dispose of his property. In truly partible inheritance areas, as for example in France, the father is required by law to divide his property equitably among all his children. Todd calls this family type the "egalitarian nuclear family."

In England, Denmark, and the western part of the Netherlands, testaments were used and fathers could potentially divide their patrimony without being bound by precise conventions of inheritance; they might prefer one child to the others and even disinherit children. Todd calls this the "absolute nuclear family," in the sense that there is a maximum of independence between parents and children, who are not, as in the egalitarian model, bound together legally.

Finally, there are societies where sons have an equal right to the inheritance, but where they do not leave the parental household upon marriage. Instead they bring their wives and continue to live with the elder generation (authoritarian parent–child ties). This authoritarian–egalitarian family type has been dubbed the "community family" by Todd (Le Play's patriarchal family) and exists in a few parts of Southern Europe and in certain Asian societies.

Although Todd's typology provides a framework for approaching differential family forms, it does not provide potential answers to the question of how certain family forms corresponded more or less systematically to people's social networks in general and to their ties to non coresident kin (in our case, elderly siblings) in particular. According to Elizabeth Bott, families differ in the degree of connectedness of their social networks, or in the extent to which the people with whom the family maintains ties, carry on relationships with one another. On the basis of her research on urban families in England, Bott distinguished two types of families with two sorts of social networks around them: the segregated conjugal family (i.e., the authoritarian, or the stem family type), which has a "close-knit" network with many relationships among the component parts around it and the joint conjugal family (i.e., the nuclear family type), which is characterized by a "loose-knit" network with few such relationships.[15]

Empirical research on kinship and social networks is scarce. A cross-national sociological study by Höllinger and Haller based on the 1986 survey of the International Survey Program shows significant differences between European nations in several indicators of social networks. The authors attribute these differences to social-cultural factors; more specifically, they argue that the closer the family structure (i.e., the higher the percentage of stem families), the higher the frequency of contacts with kin. Moreover, they find that the extent of contacts with kin is inversely proportional to that with non-kin.[16] Ethnographic studies describing kin relations in (farming) populations with specific inheritance and cultural customs show, however, immense variation at the regional and subregional level. Sigrid Khera, in a study on an impartible inheritance area in Austria, observed that once non-inheriting siblings had left the parental farm, ties among siblings became tense and they tended to avoid each other.[17] Sonya Salamon, on the other hand, showed that the kinship values associated with impartible inheritance in Irish-ethnic American farm families in Illinois, resulted in stronger family solidarity, including more intensive bonds among non-coresident siblings than could be observed in a neighboring community consisting of immigrants of North-German descent where partible inheritance was practiced.[18] Martine Segalen found in partible inheritance, Brittany too, that tensions among adult siblings arose because of the combination of an ethic of equity and the fact that nothing was ever settled.[19] Even within one area with the same inheritance customs, sibling ties may diverge. In two nearby villages within the same impartible inheritance area of the Pyrenees, one situated in the lowlands and the other in the high mountains, it was found that the quality of sibling relations depended on specific ecological factors.[20]

Previous empirical results show that neither large-scale surveys, nor ethnographic studies give definitive answers to the question of how different (regional) kinship values related to specific family forms connect to the composition of people's social networks and sibling ties. The high aggregation level of sociological surveys masks

variance in family forms and social networks among regions, subregions, and social groups. The ethnographic studies give detailed descriptive accounts of family forms and kin ties in specific regions, localities, and for specific social groups. As case studies however, they are not designed for comparative purposes and in order to test hypotheses. Hence, this study applies a two-stage, mixed-methods approach, combining a description of regional family forms on the basis of ethnographic and historical materials, with the empirical testing on the basis of a survey of the effects of regional family types on the contact frequency between siblings. In the next section, we start with a portrayal of family forms in three regions of the Netherlands.

The Three Regions: Differential Patterns and Customs

The three regions under study are positioned respectively in the northwestern, the eastern, and the southeastern parts of the Netherlands. "Noord-Holland's middle region" is located directly north of Amsterdam in the province of Noord-Holland. Since the sixteenth century, agriculture in Noord-Holland, as in the whole western and northern rim of the Netherlands, was highly market-oriented and commercialized. Farmers specialized in dairy cattle farming, producing cheese and butter for the market. The region of Salland is located in the middle of the province of Overijssel, situated in the eastern part of the Netherlands. On the sandy soil of Salland, cultivated land consisted of a mixture of pastureland used for holding dairy and calve cows, and arable land where rye, potatoes, and oats were produced. Many farmers owned wasteland. The area of Northeast Brabant is located on the large sandy soil of Noord-Brabant in the south of the Netherlands (see Figure 1). As in Salland, mixed farming predominated and moors (wasteland) were an important component of the farming process. The relatively small size of the farms in the Noord-Brabant area, in comparison to those of Salland, was the result of high population pressure and constant division of land.[21] During the first four decades of the twentieth century, both in Salland and in Noord-Brabant, farming was intensified, and bringing wasteland under cultivation increased the acreage of arable land.[22]

The regions differed not only in terms of their agricultural orientation but also in demographic respect. In Western Europe, from the sixteenth century until at least the Second World War, the so-called West-European or Malthusian marriage pattern prevailed. It was characterized in its ideal form by a high to very high age at marriage, a relatively high percentage of men and women who never married, and an unrestricted marital fertility. During the nineteenth century and first half of the twentieth century, on average, marriage opportunities in the Netherlands did not diverge much from what was common in other parts of Europe. Striking, however, are the regional differences in marriage patterns *within* the Netherlands as can be observed in figures 2 and 3.[23] The province of Noord-Holland was characterized by an early age at first marriage and a high prevalence of marriage. Moreover, marital fertility was extremely low; Noord-Holland was a forerunner of birth control.[24] In contrast, in the province of Overijssel, men married relatively late while the number of unmarried men aged forty to forty-four was slightly above the national average. However, marital fertility was relatively low in this province. The province of Noord-Brabant approached the ideal of the Malthusian pattern most exactly with very low percentages of married men at early ages and very

Figure 1. Location of the Three Regions in the Netherlands

high proportions of never married. Marital fertility in Noord-Brabant was higher than anywhere else in the Netherlands during the nineteenth century.[25]

Divergent regional patterns become first more pronounced in the course of the nineteenth century and started only to converge after 1879. Until the Second World War, regional differences in marriage patterns remain important. If we take into account that these figures reflect provincial averages and include not only rural municipalities but also cities, it might be surmised that among the more traditional farming class, specific regional patterns in family formation must have remained even longer intact. For instance, while in the province of Noord-Brabant, on average,

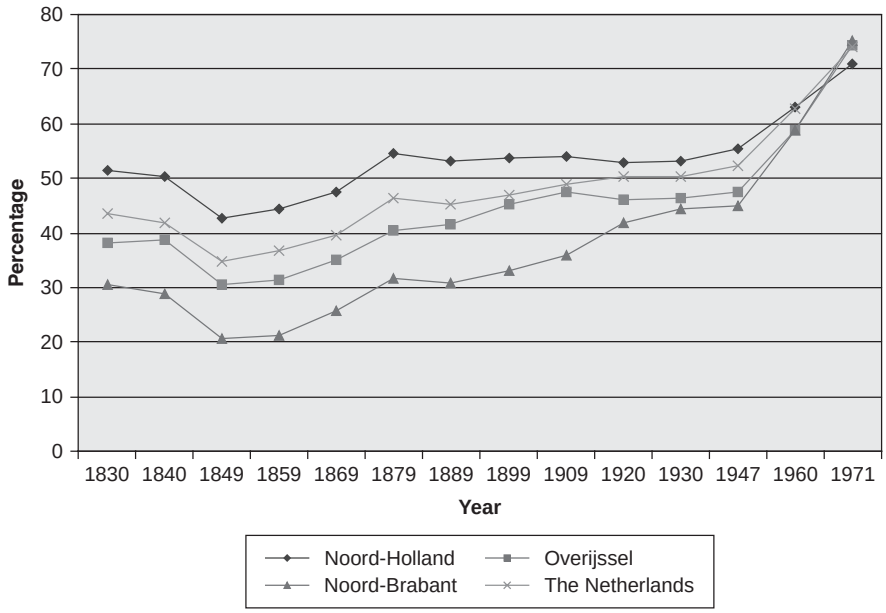

Figure 2. Percentages of Married Men Aged 25–29 Between 1830 and 1971: Regional Differences
Source: Dutch Censuses, 1830–1971, Statistics Netherlands.

marriage fertility declined drastically after 1910, it remained high in the eastern rural sandy soil area.[26] Thus, opportunities for marriage and family formation of present-day cohorts of Dutch elderly born in farming families were molded by historical marriage patterns that strongly differed geographically.

Related to regional marriage patterns were specific customs with regard to coresidence and neighborhood bonding. In the Salland area, as in some other regions in the eastern Netherlands, stem families were common.[27] At the marriage of the heir, the young couple literally "married in" and became part of the parental household. When the young couple had children, stem families were the result. This custom was closely connected to impartible inheritance practices, as the farm and land were transmitted to the marrying son. In return, the heir had the duty to board and lodge his unmarried siblings. Table 1 shows that, even in 1956, the custom of coresidence was still alive; almost 20 percent of all households in rural municipalities in Overijssel contained coresiding kin. In Noord-Holland, on the contrary, couples hardly had any coresident kin (and personnel) living with them. In the province of Noord-Brabant the custom of "marrying in" was unknown, but extended households, consisting of unmarried siblings living together, were the unintended effect of regional customs of property devolution in this area, which will be discussed later.[28]

Not only strong links among the generations were common in the Salland region, but also neighboring relations were tight-knit. The customary duty of *noaberschap* (neighbor help) comprised the obligation to provide all neighbors in a well-defined

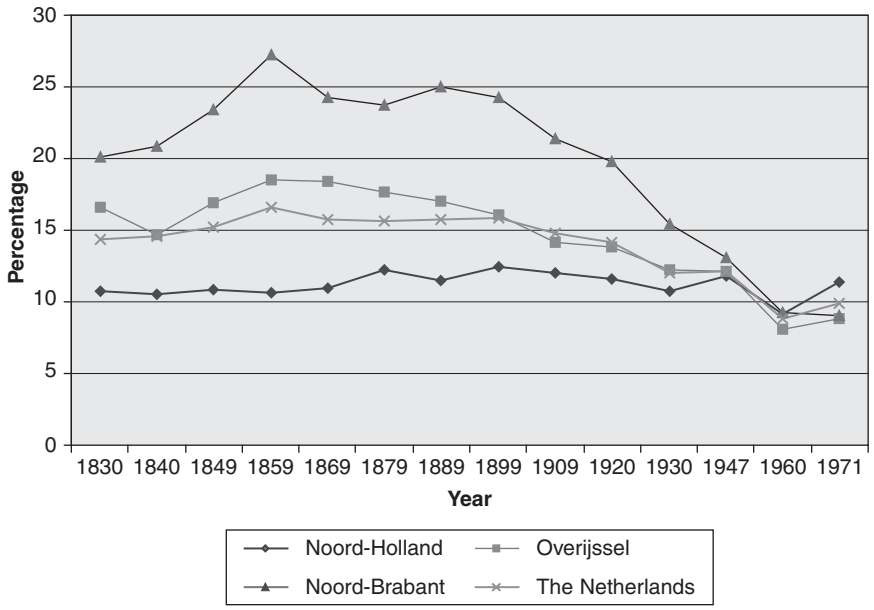

Figure 3. Percentages of Unmarried Men Aged 40–44 Between 1830 and 1971: Regional Differences

Source: Dutch Censuses, 1830–1971, Statistics Netherlands.

Table 1
Regional Distribution of Coresidence in 1956 and 1879

	1956 Agrarian municipalities with less than 5,000 inhabitants	*1879 Municipalities with less than 10,000 inhabitants*		
	Percent of households with coresidents	*Number of coresidents per 100 households*		
		Kin/others	*Personnel*	*Total*
Noord-Holland	6.9	23	22	45
Noord-Brabant	13.1	40	24	64
Overijssel	18.9	53	28	81
Salland[a]	Unknown	58	32	90
The Netherlands	12.2	36	26	62

Source: adapted from Verduin (1985) 75.
a. Agrarian municipalities.

area, often within the borders of the former commons, with services and help whenever needed. This custom did not exist in the other regions.

Regional patterns of coresidence and neighbor help were strongly correlated with inheritance practices. In the Netherlands, with the introduction of the French Civil Code in 1811, partible inheritance was legalized. In this system, all children were entitled to an equal share of the inheritance. Nevertheless, in some regions, farmers transmitted their property according to regional customs of property devolution.

In Noord-Holland, farmers practiced partible inheritance, but they did so in ingenious ways, without dividing their land among all children. One successor took over the farm and other children were usually in some way or the other compensated. Transfer of the farm took place during the lifetime of the parents. In a governmental survey on the situation of the farming class in the Netherlands in 1886, it was noted: "When children marry, not seldom is the farm handed over by the parents to the newlyweds."[29] Notary acts show that farmers spread their property; they owned parcels of land of different sizes in different places, and had diverse personal property in the form of obligations, gold and silver, and mortgages. Through shuffling around these lots and by active buying, selling, renting, and hiring on the land market, parents were able to set up their other children in farming, either by buying or renting property for them or by transferring an advance on the inheritance.[30] The moment of transmission, therefore, did not restrain children from leaving home, marrying, and setting up in farming at a relatively early age.[31]

In Salland, on the other hand, impartible inheritance, also referred to as Saxon inheritance law or *Anerbenrecht*, was practiced. A governmental survey, which probed into the situation of Dutch farmers in 1886, reported for Salland that "when parents get old and have children, they bequeath their real estate and personal property by will to one of their children."[32] In most Salland communities, the child that lived longest with the parents became the heir of farm and land. Transfer of inheritance frequently took place late during the lifetime of the parents. The other siblings were only partly compensated and never received their legal part. Instead, they had a right to live in the parental home when they contributed to the work, and a dowry (amongst others, a cow) or a fixed amount of money when they married and left the farm.[33] Even in the 1940s, the knowledge "that this way of doing is necessary in order to keep the farm alive, that the stayer earns something because he takes care of the parents, and just general feelings of solidarity," justified the inequality of the system for the non-inheriting siblings.[34] Striking is the continuity in impartible inheritance customs in this region. Even at the end of the twentieth century these customs were still alive.[35]

The southern provinces were known as partibility areas; in Northeast Brabant, equal devolution of property and use-rights among all siblings was the norm. However, land and farm were divided only after both of the parents had died. The governmental agricultural survey of 1886 reported about the situation in this area: "As long as father and mother are alive, children never ask for division, out of respect for their parents; even until after their [HB: the parents'] death, the household community is prolonged and the effect of this is that the children, if they remain unmarried, will remain coresiding together [HB: on the parental farm]." (…) "The longest living parent remains in charge of the whole estate, often helped by one or more unmarried children, and the non-resident children help themselves rather with all kinds of means than to use their inheritance rights; this would go against the manners of the population."[36] After the parents' death, the estate was either converted into money, and the children settled themselves as renters, or they mutually made an agreement and one of them remained in the parental home, while all brothers and sisters were to be paid their proportions of the inheritance.[37] According to a survey among notaries, in 1949, when this manner of property devolution was still practiced: "The general human trait to hand down a farm intact to the next generation applies here less than the attachment of the farmers to their way-of-life and occupation."[38]

Table 2
Family forms in the three regions

Region	*Inheritance rules*	*Separation parents-children*	*Residence*	*Family type (Definition Todd)*
Salland	Impartible	Delayed	Patrilocal	Authoritarian–inegalitarian
Northeast Brabant	Partible	Delayed	Neolocal	Egalitarian nuclear
Noord-Holland's Middle	Partible—use of wills	Early	Neolocal	Absolute nuclear

To sum up (Table 2), family patterns in Noord-Holland's middle region show strong similarities with Todd's absolute nuclear type. Siblings married relatively early and settled away from the parental home. By use of testament, the father could freely dispose of his property, making family ties loose and liberal. The "egalitarian nuclear" type can be found in the Northeast Brabant region. Inheritance practices were truly partible, but this meant, in reality, a closer family structure than in Noord-Holland since all siblings *had* to receive an equal part of the inheritance. The generations were even more linked because of constrained marriage opportunities and inheritance customs stipulating that only after both parents had died, property was divided. In Salland, family form was most vertically close. The farm, symbolizing the ancestral line, was handed down to one heir, while siblings were not equally compensated. Kinship values underlying the authoritarian family type in this region are also expressed in customs of kin coresidence and neighbor help.

Possible Influences on Sibling Ties

In what way did kinship values influence social networks and ties among (elderly) siblings? Following Bott, we expect that the number of ties in Salland people's personal communities will likely have been larger and relations with non-coresident kin and neighbors will have been proportionally greater than in the other regions. Secondly, on the basis of Bott's family-kinship patterns we might also expect that siblings in this region maintained more contact with each other (even in old age) than in the other regions. As has been described in several ethnographic studies, children in authoritarian families are socialized in a more family-oriented kinship system, stressing linkages between and within the generations, even when family members did not live together anymore. We expect sibling relations to be next most tight in the northeastern Brabant region where the relatively long duration until parents and children got separated might have resulted in relatively strong ties. We expect networks in the Noord-Holland region to be most loose-knit. They will likely have been smaller, containing fewer kin and neighbors than in the other regions. Kinship values in this region might have resulted in less contact between siblings.

The kinship value system is thought of as one possible influence that structures relationships. Individual characteristics, one's family background, and characteristics of the sibling relationship itself might also have influenced contact with siblings in old age. First of all, gender may play a role. Women are often thought of as "kinkeepers"; they tend to devote more time maintaining family relations than men do.[39] It might further be expected that birth cohort played a role; sibling sets experiencing

dramatic events together—such as the Depression or the Second World War—during their formative years might have been more drawn together than cohorts without these common experiences.[40] Socially homogamous persons (persons who were farmers or married farmers) might have kept stronger sibling bonds than those who sought alternative employment and had left the farming environment.

The religious orientation of the parental home during one's upbringing might also have influenced contact frequency among siblings later in life. Persons raised in Catholic households might have had more contact with their siblings because of the many festivities and traditions associated with the Catholic faith. However, it has also been argued that because marriage in the Catholic faith is raised to sacrament, the individualization of the household from the larger family is stimulated. Calvinists are often thought to have more individualized life styles. Recent research suggests that rigid, literalistic, or guilt-driven interpretations of religion (such as Calvinism) are associated with family relationships that are oriented to control, rules, and specific roles rather than spontaneous enjoyment.[41]

We also expect untimely death of a parent during one's youth to have influenced sibling ties. Adults who experienced childhood paternal death were found to be closer; they reported a higher number of their brothers and sisters among their closest friends than persons raised in intact families.[42] In the same vein, it might be surmised that experiencing a significant life event during one's youth might have drawn siblings closer together. Family culture, that is the religious, cultural, and financial capital of the parental home, might have affected sibling ties too. Religiosity, the role that religion played in the parental home during youth, is expected to have positively influenced contact among siblings. Research shows that adolescents from religiously involved families maintain closer family relationships than those from families that are less actively involved in religious activities.[43] The more cultural capital there was in the parental home, the more likely that children were raised with values underlining individualism instead of traditional family values, and thus the more likely that sibling bonds were relatively loose.[44] It might be further expected that persons originating from families who could dispose of little financial capital, had smaller social networks and thus clung more to their kin than persons from families with a better financial situation. The total number of siblings is expected to have had a positive effect on sibling bonds. Children from larger families have been found to maintain stronger sibling bonds than those from smaller families.[45] However, it could also be argued that the larger the set of siblings a person has available, the more he or she has to spread attention among them, resulting in less intensive relations.

The quality of sibling ties could also be a result of characteristics on the dyadic level of the relationship itself. Persons who are more similar are usually thought to have closer bonds because they can identify better with each other.[46] Thus, siblings in same-sex dyads might have had better relationships than cross-sex sibling pairs. Particularly, the sister–sister relationship tends to be strong.[47] Similarly, sibling pairs that are both partnered or both single would have had closer ties than dyads with a different partnership status. Conversely, however, it might be argued that differences in partner status in sibling dyads foster closer ties, since exchange of resources is stimulated.[48] We further expect an influence of stepsiblings composing the relationship. The stepsibling bond has been thought of as being less close than that between full siblings.[49] Finally, geographical distance between siblings might have played a role. The closer the siblings live together, the easier it is to have frequent contact.[50]

DATA, MEASURES AND METHODS

Data on the life histories, social networks and frequency of contact in personal sibling relationships were obtained from a survey on the "Living Arrangements and Social Networks of Dutch Older Adults in The Netherlands (LSN-NESTOR)."[51] In 1992, face-to-face interviews were conducted with 4,494 respondents, who constituted a representative stratified random sample of men and women born between 1903 and 1937. The sample was drawn from the population registers of eleven municipalities in three regions in the Netherlands, representing differences in religion and urbanization. In the western part of the Netherlands, data were collected in Amsterdam and in two large rural municipalities. In the eastern part of the Netherlands (province of Overijssel), a city and four rural municipalities were selected, and in the southern province of Noord-Brabant, life history data were drawn from respondents living in a city and in two rural areas. In the interviews, not only relevant information on the living arrangements of respondents' parental backgrounds and life courses were gathered, but also information about their social networks, and the contacts with network members. To be sure, the network data is cross-sectional and pertains to the current life course phase of late adulthood and old age of the respondents, as it was in the year 1992.

For the purpose of this study, we selected only those respondents who were born in farming families, that is whose father's or mother's last occupation was farmer, and who lived in rural municipalities at the time of the interview. Moreover, we chose localities which represented different family forms. Two rural communities, Uden and Boekel, represent the northeastern region of the province of Noord-Brabant. The municipalities of Waterland and Wormerland, which are a recent fusion of many old villages and hamlets, characterize Noord-Holland's middle region. Of the four rural municipalities in the eastern part of the province of Overijssel, only Ommen belonged to the region of Salland, where impartible inheritance was practiced, so we included only this community.

Not all respondents were born in the communities where they lived in 1992. We included only respondents who lived during their youth, until age 15, either in the selected municipalities or in a rural municipality within a range of 20 km from the selected municipalities. Furthermore, respondents raised in communities that were located within the 20 km range but belonged to a distinct cultural region—with regard to type of inheritance practice, marriage and household formation patterns or other cultural customs—were excluded as well. Finally, to be able to study sibling relations, only those respondents could be included of whom at least one sibling was still alive. This left us with a sample of 264 respondents: 60 persons in Noord-Holland, 86 in Overijssel, and 118 in Noord-Brabant. On average, these respondents had about four siblings still alive. In total, we studied 1,037 sibling relationships.

First of all, regional differences in the size and composition of personal social networks were charted. In order to identify socially active relationships in the core as well as in the outer layers of their social networks, people were asked to name all people above age eighteen with whom they had frequent contact and who were important to them.[52] We assessed the strength of sibling ties by the contact frequency in their relationships. In the survey, respondents were asked to identify all siblings and, for all living siblings, how often they were in touch with a particular sibling. Being in touch with included face-to-face contact, as well as contact by phone or in

writing. Contact frequency was classified into eight categories, ranging from "never" (1), "once a year or less" (2), "few times a year" (3), "once a month" (4), "once a fortnight" (5), "once a week" (6), "few times a week" (7), and "each day" (8).

A variable region was included to assess the impact of different family types and their accompanying kinship values on contact frequency between siblings. Since we control for possible effects of a whole range of other socioeconomic, demographic, and cultural factors that could also explain regional variation, the variable region measures the effects of kinship values as well as possible with the data available.

As control variables, we included the earlier mentioned individual, family background and, relationship characteristics. First of all, sex, birth cohort, and whether respondents had been occupationally homogamous were included. Although the difference is not large, respondents from Salland were significantly younger (69.1 years old in 1992) than those from Noord-Holland and Noord-Brabant (72.3 and 72.4 years old respectively) (see Table 3). In order to determine whether a respondent was occupationally homogamous, occupations of fathers, mothers, respondents, and their partners were coded on the basis of the Historical International Standard Classification of Occupations (HISCO) scheme of occupations and converted into 12 occupational classes.[53] On the basis of these occupational classes, a variable was constructed measuring whether or not the father (parent) and son (or son-in-law) belonged to the farming class.

Father's religious denomination was assessed during the youth of the respondent and classified into 5 categories: "no church member," "Reformed," "Dutch Reformed (Calvinist)," "Roman-Catholic" and "Other denominations." Table 3 shows a highly significant difference in the religious composition of the regions. Broadly speaking, respondents from Noord-Holland's middle region were either Reformed or Roman-Catholic. In Salland, the largest religious groups were the Reformed and the Dutch Reformed, and in the Noord-Brabant region virtually all respondents were raised in Roman-Catholic families. There are also considerable regional differences in whether or not respondents had lost one or both parents in youth: while only 3 percent of the respondents in Noord-Holland and 6 percent of those in Salland had lost a parent, 14 percent of those born in Northeast Brabant had experienced this tragic event before age 15. Since households in the Northeast Brabant contained far greater numbers of children, the chance of being born when the parents were already at an advanced age and therefore the risk of experiencing one of them dying during youth, was higher. In this area, as was noted before, the restrictive marriage pattern of high marital fertility of those who married remained intact longer than in the other areas.

In order to assess the extent of religious, cultural, and financial capital in the parental home, respondents were presented with a number of statements about their parental families during youth. To tap religiosity of the parental home, the following statement was formulated: "In our home, issues linked with religion and the church were considered to be very important." Cultural capital, or better the lack of it, was assessed with the statement: "Few books and newspapers were read in our home"; for financial capital, the statement, "Compared to many other families, we were well off financially" was formulated. Answer categories ranged from "no" (1), "more or less" (2), to "yes" (3). In Noord-Holland 70 percent more or less, or fully agreed that religion was very important in the parental home, in Northeast Noord-Brabant this was the case for 89 percent and in Salland for even 93 percent of the respondents. The extent of cultural capital also differed significantly among the regions. The lowest amount of cultural

Table 3
Means and percentages of variables in the data set for the three regions (in 1992)

	Noord-Holland's Middle	*Salland*	*Northeast Brabant*	
Individual characteristics				
N	60	86	118	
Sex (male/female)	45%	44%	53%	
Birth cohort				*
1903–1917	42%	34%	43%	
1918–1927	42%	28%	34%	
1928–1937	16%	38%	23%	
Age	72.3	69.1	72.4	*
Family characteristics				
Father's religious denomination				***
No church member	3%	1%	0%	
Reformed	48%	50%	0%	
Dutch Reformed	7%	41%	1%	
Roman-Catholic	40%	8%	99%	
Other	2%	0%	0%	
One/both parent(s) died (no/yes)	3%	6%	14%	*
Significant life event (no/yes)	17%	14%	15%	
Religiosity in parental home				***
Unknown	0%	0%	1%	
No	30%	7%	10%	
More or less	23%	21%	16%	
Yes	47%	72%	73%	
Little cultural capital in parental home				***
Unknown	0%	0%	1%	
No	37%	12%	36%	
More or less	41%	41%	30%	
Yes	22%	47%	33%	
Financial capital in parental home				
Unknown	0%	0%	4%	
No	50%	34%	35%	
More or less	22%	27%	25%	
Yes	28%	39%	36%	
Socially homogamous	30%	42%	39%	
Number of siblings alive	3.8	3.2	4.6	***
Number of siblings died	1.8	1.5	2.3	**
Current (=1992) sibling relationship characteristics				
N	220	275	537	
Sibling-stepsibling	0%	3%	5%	***
Partner composition				**
Partner–partner	60%	61%	63%	
No partner–partner	13%	20%	20%	
Partner–no partner	17%	15%	9%	
No partner–no partner	10%	5%	8%	
Sex composition				*
Brother–sister	36%	31%	26%	
Brother–brother	23%	27%	22%	
Sister–brother	18%	20%	25%	
Sister–sister	23%	21%	27%	
Geographical distance	1.1	0.7	1.6	*

Source: Living Arrangements and Social Networks of Older Adults in the Netherlands (VU Amsterdam).
*Significant at 0.05 level. ** Significant at 0.01 level. *** Significant at 0.001 level.

capital was found in Salland where 88 percent agreed more or less or fully that "few books and newspapers were read in their parental home." The total number of siblings (alive and dead) demonstrates, as could be expected from the demographic descriptions, significant regional differences. Respondents from Noord-Brabant had the largest number of siblings (on average almost seven in total).

The sex composition of the relationship indicates whether we deal with brother–sister, brother–brother, sister–brother, or sister–sister pairs, while the partnership composition of the sibling pair was constructed by relating the partner status of the respondent (partner, no partner) with the partner status of the sibling. Strangely enough, there are significant regional differences in the sex composition of sibling pairs. The Salland population included more brother–brother relationships, while in Noord-Brabant a greater proportion of sibling relationships consisted of 2 sisters. In the Noord-Brabant area, 5 percent of all sibling relationships included a stepsibling, in Salland 3 percent, and in Noord-Holland no stepsibling relationships were reported. Higher mortality and remarriage rates and larger household size, meaning that many siblings at a time are marked as stepsiblings at the moment of a remarriage, explain this regional variation. Geographical distance between siblings was assessed by traveling time in hours, such as reported by the respondent. Proximity between siblings varied regionally as well. Siblings born in the northeastern part of Noord-Brabant on average live significantly farther away (1.6 h) from each other than sibling pairs from Noord-Holland (1.1 h) and from Salland (0.7 h). In the large Brabant families, not only is the chance that siblings got dispersed greater, but scarcity of socioeconomic opportunities in the near vicinity and consequent out-migration must have played a role as well. Conversely, Salland families remained more spatially concentrated.

Multivariate analyses were performed in order to evaluate the effects of regional kinship values on differences in contact frequency in sibling relationships, while controlling for the possible effects of other socioeconomic and demographic factors. We compensated for the hierarchical structure of our data, that is, the fact that often more than one sibling relationship was nested in a respondent. Because we assume that the ties with siblings held by one respondent are more alike than sibling relationships of different respondents, we applied hierarchical multilevel analysis.[54] If we had applied ordinary linear regression analysis, not only would the assumption of the independence of the error terms had been violated, but—since respondents from large families would have been represented in larger numbers than respondents with fewer brothers and sisters—also the number of degrees of freedom and the significance of the effects would have been overestimated. Multilevel analysis takes both levels, that of the respondent and of the sibling relationship, into account simultaneously.

RESULTS

Size and Composition of Social Networks

Table 4 shows that the size of personal social networks varied significantly across the regions. In Salland, personal networks contain as many as eighteen people, while respondents from Northeast Brabant mention not more than nine people that they consider relevant. The finding that personal networks in Salland are large does not surprise us, given the strong vertical links and the custom of neighbor help in this region. However, the relatively small size of personal networks in Noord-Brabant

Table 4
Social network characteristics of respondents, according to region

	Noord-Holland's Middle	*Salland*	*Northeast Brabant*
Total network size	12.6	18.5	9.6***
Size of partial networks			
Partner (no/yes)	0.6	0.7	0.6
# Children	2.3	3.4	2.3***
# Children-in-law	1.4	2.3	1.1***
# Siblings	1.1	1.8	1.0***
# Siblings-in-law	1.3	3.1	0.9***
# Other kin	1.4	1.4	0.5***
# Friends	1.4	0.8	0.5***
# Neighbors	1.6	2.7	1.4***
# Other non-kin	2.2	2.3	1.2*
Proportion of partial networks			
Partner	0.08	0.05	0.12***
Children	0.27	0.22	0.27
Children-in-law	0.16	0.14	0.08***
Siblings	0.10	0.11	0.10
Siblings-in-law	0.04	0.14	0.07***
Other kin	0.08	0.07	0.04
Friends	0.05	0.04	0.05
Neighbors	0.13	0.13	0.16
Other non-kin	0.09	0.11	0.10
Percentage of siblings alive present in network[a]	39%	61%	28%***

Source: See Table 1.
a. Number of siblings in network/number of siblings alive.
*Significant at 0.05 level. **Significant at 0.01 level. ***Significant at 0.001 level.

(a region with small-scale family farming, late separation of parents and children, Catholicism, and high marital fertility) was not expected. However, the Noord-Brabant region was a true partible inheritance area; instead of handing down the farm and keeping it in the family, priority was given to dividing up the land among all siblings. It has been argued that the bilateral character of kinship and the emphasis on the independent nuclear household explains the existence of partible inheritance in this region.[55] Perhaps, the emphasis that people placed on their own households might explain the relatively small size of their social networks too. Moreover, out-migration from the area resulted in geographically spread-out families; large distances among kin might also have reduced their importance in Brabanders' social networks.

The composition of networks, such as measured by the number of different categories of network members (partial networks), differs between the regions as well. Although this region does not stand out particularly for its high marital fertility, networks in Salland include relatively many children and children-in-law. Also the high number of siblings and siblings-in-law in the networks here is striking. This might have been a result of stronger sibling bonds in this area. However, geographical concentration of sibling sets,

or, for that matter, other characteristics of this population, could explain this result as well. Approximately two times as many neighbors were present in Sallanders' networks compared to the other regions, which stresses the continuing importance of the institution of neighbor help even in the late twentieth-century. In the social networks of respondents from Noord-Holland, the relatively high number of "friends" stands out. This result echoes Höllinger and Haller's finding that, in countries with a looser family structure, contacts with non-kin are comparatively more important.[56]

When we look at categories of network members as a proportion of networks, other regional differences appear. In Noord-Brabant, comparatively more often partners are present in social networks, while children-in-law make up a considerably smaller proportion. Both findings stress the importance of the own, nuclear family. In Salland, siblings-in-law comprise, also proportionally, a considerably larger part of personal networks than in the other regions. Most likely, kinship values underlining (larger) family solidarity, principles of neighbor help, as well as close proximity among siblings are expressed in this result.

Finally, we calculated the number of siblings that were included in personal networks as a proportion of all living siblings available for contact. In Salland, siblings loom large in respondents' social networks. More than 60 percent of one's living siblings are part of Sallanders' personal communities. In the other regions, people include smaller proportions of their sibling set, some 39 percent in Noord-Holland and only 28 percent in the Brabant region. The relatively large average distance between Noord-Brabant respondents and their siblings (see Table 3) might explain their absence. Having to spread attention among larger numbers of siblings, or weaker ties might have been other reasons. To conclude, in order to be sure which factors contributed to the quality of sibling relations, and whether there were indeed regional differences, in the next section we will assess how regional kinship values influenced contact frequency while controlling for possible effects of other socioeconomic and demographic factors.

Contact Frequency Between Siblings

Effects of region (i.e., regional kinship values related to family forms) on the contact frequency between siblings were estimated by building up the analysis in consecutive steps. By introducing in each model a new block of variables we could see to what extent blocks of variables, such as relationship characteristics, family structure, and family culture, explained away the effects of region on contact frequency between siblings (see Table 5).

On average, contact frequency between siblings ranged between once a month and once a fortnight ($B = 4.43$) (Model 0). Introducing sex and birth cohort did not lead to a significant model (Model 1), but adding the variable region in Model 2 leads to a better model fit (decrease in –2 LL) and a highly significant chi-square. Model 2 shows that respondents from Salland and from Northeast Brabant have significantly more contact with their siblings than persons born and raised in the Noord-Holland region. The effects are relatively large as well. Measured on an 8-point scale, persons from Salland have 0.88 and those from Noord-Brabant have 0.51 points more contact on average with their siblings than persons from Noord-Holland.

After adding the relationship characteristics in Model 3, the effect of region remains the same in the case of Salland, and becomes even larger and more significant in the

Table 5
Linear multilevel model results explaining sibling contact using full maximum likelihood estimation
(N = 1,032 sibling relationships from 264 respondents)[a]

	Contact frequency											
	Model 0		*Model 1*		*Model 2*		*Model 3*		*Model 4*		*Model 5*	
Variable	B	*SE* B	B	*SE* B	B	*SE* B	B	*SE* B	B	*SE* B	B	*SE* B
Intercept	4.43	0.08***	4.33	0.28***	3.85	0.31***	3.84	0.22***	4.24	0.29***	3.23	0.42***
Individual characteristics												
Sex			0.01	0.16	0.01	0.16						
Birth cohort												
1918–1927 (1903–1917=ref.)			0.25	0.20	0.26	0.19	0.23	0.19	0.25	0.19	0.23	0.19
1928–1937			0.01	0.20	–0.10	0.20	–0.13	0.20	–0.05	0.22	–0.01	0.22
Region												
Salland (Noord-Holland's Middle=ref.)				0.88	0.23***	0.88	0.22***	0.79	0.22***	0.53	0.23*	
Northeast Brabant					0.51	0.21*	0.58	0.20**	0.65	0.20**	0.42	0.21
Current relationship characteristics												
Step-sibling							–0.83	0.39*	–0.71	0.40	–0.59	0.40
Partnership composition												
No partner–partner (partner-partner=ref.)						–0.07	0.17	–0.07	0.17	–0.07	0.17	
Partner–no partner							0.08	0.14	0.07	0.14	0.06	0.14
No partner–no partner							–0.16	0.21	–0.17	0.22	–0.16	0.21
Sex composition												
Brother–brother (brother–sister=ref.)							0.23	0.12	0.22	0.12	0.22	0.12
Sister–brother							–0.08	0.18	–0.10	0.19	–0.07	0.19
Sister–sister							0.37	0.18*	0.35	0.18	0.37	0.18*
Geographical distance							–0.09	0.01***	–0.08	0.01***	–0.08	0.01***
Family structure characteristics												
Number of siblings alive									–0.07	0.03*	–0.09	0.03**
Number of siblings died									–0.04	0.04	–0.08	0.05
Parent died during youth									–0.03	0.30	0.01	0.30

Significant life event during youth					–0.03	0.23	–0.10	0.22
Socially homogamous					–0.01	0.17	–0.09	0.17
Family culture characteristics								
Religiosity parental home							0.37	0.14**
Little cultural capital parental home							0.11	0.10
Financial capital parental home							0.08	0.10
–2 Log Likelihood	3797.6	3795.7	3781.1	3682.3	3676.4		3665.6	
Additional df		3	2	7	5		3	
Chi-square		1.9	14.6***	98.8***	6.0		10.7*	

Source: See Table 1.

a. All models give the unstandardized regression coefficients.

*Significant at 0.05 level. **Significant at 0.01 level. ***Significant at 0.001 level.

case of Northeast Brabant. Furthermore, it can be observed that when a relationship consisted of stepsiblings, contact frequency was indeed significantly lower (B = –0.83). As predicted, relations between sisters are stronger (B = 0.37). Brothers also have more contact than cross-sex dyads, but this estimate is not significant. An important predictor of contact frequency is the geographical distance between siblings. With every 1 hour more to travel, the incidence of contact declines by 0.09 points.

Introducing family structure characteristics in Model 4 only slightly changes the influence of region on contact frequency.[57] The magnitude of the effect of living in Salland decreases from B = 0.88 to B = 0.79, while that of being a resident of Northeast Brabant even increases (from B = 0.58 to B = 0.65), but the significance of the effects remains the same. The size of a respondent's (living) sibling set has a significant effect on the amount of communication with each sibling too. The higher the total number, the lower the incidence of contact in separate sibling pairs (B = –0.07). This result lends support for the distribution of attention hypothesis; in large sibling sets, relations between separate sibling pairs are less intensive.

The indicators of family culture, that is, religious, cultural, and financial capital, were added in a final model (Model 5). As expected, a religious upbringing has a positive effect on sibling relationships, even in later life. The higher the importance attached to issues linked with religion and the church in the respondents' parental homes, the more often elderly are still in touch with their siblings (B = 0.37). Religiosity of the parental home explains away a large part of the regional effects on the amount of contact between siblings. The positive effects of being a resident of Salland and Noord-Brabant not only become smaller (B changes from 0.79 to 0.53 for Salland and from 0.65 to 0.42 for the Brabant area) but they become less significant as well. After introduction of the "religiosity" variable, only the regional effect of Salland remains significant. However, this effect is still 0.53 on the earlier-mentioned 8-point scale, as compared to an effect of 0.37 for being raised in a religious family culture. Thus, the regional effect of impartible inheritance Salland is large and still clearly visible.

CONCLUSION AND DISCUSSION

Family and kin relations in the past are an illusive topic. Without excellent qualitative sources, the nature of historical kin ties remains extremely hard to uncover. This study has taken another vantage point. Recent insights from anthropological work on kinship are combined with a sociological network approach to offer a new perspective to explore the (historical) kinship domain. We have implemented this approach through a two-step, mixed-methods research strategy. On the basis of qualitative ethnographies and historical materials, we describe family types prevalent among farming families in three regions in the Netherlands, thus providing a window on cultural kinship ideologies. In a second step, we formulated hypotheses and tested, on the basis of quantitative survey data, whether these regional kinship value systems were related to the width of social networks and the strength of sibling relations, while controlling for possible effects that could also explain regional variation. The survey was collected in 1992 and contains information on the life courses and social networks of (now) elderly persons, who were born in farming families during the first four decades of the twentieth century.

We found clear regional differences in family types and in the accompanying social networks and sibling relations. In the eastern region of Salland—an area with impartible inheritance, stem families, and the existence of a custom of neighbor help—social networks were largest and people included relatively more of their siblings in their networks. Multilevel analysis showed that when controlling for other factors explaining sibling communication, kinship values inherent in the family type specific to Salland had a positive effect on contact in sibling relationships. Although siblings were treated unequally in terms of property and inheritance, kinship values emphasizing the preservation and transmission of the family farm not only socialized children in accepting their unequal fates, but also fostered strong family (and community) ties. Kinship values in the partible inheritance area of Northeast Brabant also expressed solidarity, partly as a result of the elongated process of leaving home due to constrained marriage opportunities in this area, but family values were, in comparison with Salland, focused more on the nuclear household and on occupational reproduction than on the continuance of the farm and the genealogical line of descent. Social networks in Noord-Brabant were relatively small and expressed the predominance of the nuclear household. The influence of kinship values related to the family form in this region on sibling contact was second largest in magnitude. When controlling for religiosity of the parental home, however, the significance of this effect disappeared. In Noord-Holland, children were able to depart from home and set up in farming at a relatively early age, while the use of testaments meant an absolute freedom for the father to dispose over his property in his own manner. The liberalness of parent–child ties of this family form was translated in networks with relatively more non-kin, while the effect of regional-specific kinship values on contact frequency with one's siblings was smallest.

Our article breaks a case for the importance of path dependency in kinship value systems. Societal changes (such as individuation, emancipation, and commercialization) might cause old customs and specific values of solidarity, deference, and authority, which constitute kinship ideologies in farming populations, to gradually disappear. Nevertheless, this study, as well as other research, shows the persistence of kinship values even into the late twentieth century. Even if cultural customs, like kin coresidence and specific inheritance practices, are now slowly disappearing, the values underlying these customs might still be alive and influence behavior. The European Values Study, for example, which is a large-scale, cross-national longitudinal survey on basic human values, shows that of the 54 European regions from which data was collected, the eastern region of the Netherlands has the highest score on indicators of social capital; 89 percent of the people in this region are members of a social-cultural organization against a European average of only 26 percent. Moreover, some 65 percent of the population in the eastern part of the Netherlands trusts his or her fellowmen, which is much higher than the European average of 35 percent.[58] Our study makes us aware of the fact that underlying many regional differentials are historical (kinship) value systems, which have been in place for a long time and still have not completely lost their significance.

Since we have placed the analysis of personal networks and kin ties in a life course perspective, linking back to respondents' families of socialization, our findings not only illuminate the historical roots of the current situation, but their significance reaches much further back. These persons were raised in farming families with a particular kinship ideology, and their situation in old age is linked to their

childhood situation in the early twentieth century through the principle of biographical continuity, meaning that people's present circumstances are affected by their pasts. Moreover, results might even be thought to apply further back in the sense that the parents of these respondents were born and raised during the second half of the nineteenth century. Thus, differences in kinship attitudes and in social relations of present-day elderly may still in a way reflect disparities in notions of kinship and social networks as they were in the past. Future research might investigate how family forms and kinship values influenced social networks and kin relations across social groups and in urban populations. It would also be interesting to expand on a more global scale and compare family forms in relation to social networks and family ties between highly different societies.[59]

NOTES

1. Giovanni Levi, "Family and Kin – A Few Thoughts," *Journal of Family History* 15, no. 4 (1990): 567; David I. Kertzer, "Household History and Sociological Theory," *Annual Review of Sociology* 17 (1991): 155–79. Barry Reay, "Kinship and the Neighborhood in Nineteenth-century Rural England: The myth of the Autonomous Nuclear Family," *Journal of Family History* 21, no. 10 (1996): 89; David W. Sabean, "Aspects of Kinship Behaviour and Property in Rural Western Europe Before 1800," in *Family and Inheritance. Rural Society in Western Europe, 1200-1800*, ed. Jack Goody, Joan Thirsk and E. P. Thompson, 100 (Cambridge: Cambridge University Press, 1976); John E. Crowley, "The Importance of Kinship: Testamentary Evidence from South Carolina," *Journal of Interdisciplinary History* 16, no. 4 (1986): 559.

2. Leonore Davidoff, "Kinship as a Categorical Concept: A Case Study of Nineteenth Century English Siblings," *Journal of Social History* 39, no. 2 (2005): 411–28. Lorri Glover, *All Our Relations. Blood Ties and Emotional Bonds among the Early South Carolina Gentry* (Baltimore and London: The Johns Hopkins University Press, 2000); Annette Atkins, *We Grew Up Together. Brothers and Sisters in Nineteenth-Century America* (Urbana and Chicago: University of Illinois Press, 2001). David Sabean, *Kinship in Neckarhausen 1700-1870* (Cambridge: Cambridge University Press, 1998).

3. Examples of studies that have focused on kin relations outside the household include: Sabean, *Kinship in Neckarhausen*; Wendy Post, Frans van Poppel, Evert van Imhoff and Ellen Kruse, "Reconstructing the Extended Kin-network in the Netherlands with Genealogical Data: Methods, Problems, Results," *Population Studies* 51, no. 3 (1997): 263–78; Muriel Neven, "The Influence of the Wider Kin Group on Individual Life Course Transitions: Results from the Pays de Herve (Belgium), 1846-1900," *Continuity and Change* 17, no. 3 (2002): 405–35. David Kertzer, Dennis Hogan and Nancy Karweit, "Kinship Beyond the Household in a Nineteenth-Century Italian Town," *Continuity and Change* 7, no. 1 (1992): 103–121. Alice Kasakoff and Inez Egerbladh, "Kin in Place. A Comparison of Northern Sweden and the American North in 1850," (paper presented at the SSHA 2005 in Portland).

4. Marilyn Strathern, *After Nature. English Kinship in the Late Twentieth Century* (Cambridge: Cambridge University Press, 1992). Janet Carsten, *Cultures of Relatedness. New Approaches to the Study of Kinship* (Cambridge: Cambridge University Press, 2000). Peter P. Schweitzer (ed.), *Dividends of Kinship. Meanings and Uses of Social Relatedness* (London and New York: Routledge, 2000). Janet Carsten, *After Kinship* (Cambridge: Cambridge University Press, 2004).

5. Henk de Haan, *In the Shadow of the Tree. Kinship, Property and Inheritance among Farm Families* (Amsterdam: Het Spinhuis, 1994), 32.

6. Michael Young and Peter Wilmott, *Family and Kinship in East London* (London: Routledge and Kegan Paul, 1957); E. Bott, *Family and Social Networks. Roles, Norms, and External Relationships in Ordinary Urban Families* (London: Tavistock Publications, 1957).

R. Firth, J. Hubert and A. Forge, *Families and Their Relatives* (London: Routledge and Kegan Paul, 1956).

7. Stanley Wasserman and Katherine Faust, *Social Network Analysis: Methods and Applications* (Cambridge: Cambridge University Press, 1994).

8. These developments have not passed unnoticed. Davidoff, for instance, has recently argued to include kinship as a category in historical research. Davidoff, "Kinship as a Conceptual Category." Others have pleaded to incorporate the social network approach as an analytic paradigm in family demography in order to advance the study of kin contextualization of households in the past. Andrejs Plakans and Charles Wetherell, "Households and Kinship Networks: The Costs and Benefits of Contextualization," *Continuity and Change* 18, no. 1 (2003): 49–76. Barry Wellman and Charles Wetherell, "Social Network Analysis of Historical Communities: Some Questions from the Present for the Past," *The History of the Family. An International Quarterly* 1, no. 1 (1996): 97–121. Charles Wetherell, Andrejs Plakans, and Barry Wellman, "Social Networks, Kinship, and Community in Eastern Europe," *The Journal of Interdisciplinary History* 24, no. 4 (1994): 639–63.

9. Barry Wellman and Scot Wortley, "Brothers' Keepers: Situating Kinship Relations in Broader Networks of Social Support," *Sociological Perspectives* 32, no. 3 (1989): 274–75. Wellman and Wortley, "Different Strokes from Different Folks: Community Ties and Social Support," *American Journal of Sociology* 96 (1990): 558–88.

10. De Haan, *In the Shadow of the Tree*, 3.

11. Abbas Tashakkori and Charles Teddlie (eds.), *Handbook of Mixed Methods in Social & Behavioral Research* (Thousands Oaks, London, New Dehli: Sage Publications, 2003).

12. F. Le Play, *L'Organisation de la Famille* (Tours: Marne, 1875). Emmanuel Todd, *The Explanation of Ideology. Family Structures and Social Systems* (Oxford: Basil Blackwell, 1985). Idem, *The Causes of Progress. Culture, Authority and Change* (Oxford: Basil Blackwell, 1987). Idem, *L'invention de l'Europe* (Paris: Éditions du Seuil, 1990).

13. Reher, who actually makes a different distinction in family patterns in Europe based only on the kind and timing of the separation process between parents and children, has connected household patterns to the strength of ties to the wider kin group. In southern European countries where the leaving home process is stretched out and children more often remain at home, ties with household and kin are strong, while in northwestern European societies, where separation between parents and children is relatively rapid, kin ties are weaker. David Sven Reher, "Family Ties in Western Europe: Persistent Contrasts," *Population and Development Review* 24, no. 2 (1998): 203–34.

14. Bott, *Family and Social Network,* 217. Micheli has also explicitly connected Le Play's family typology to households' wider networks on the basis of the work of Bott. Giuseppe A. Micheli, "Kinship, Family and Social Network: The Anthropological Embedment of Fertility Change in Europe." *Demographic Research* 3, article 13 (2000), http://www.demographic-research.org/Volumes/Vol3/13.

15. Bott, *Family and Social Network,* 59.

16. Franz Höllinger and Max Haller, "Kinship and Social Networks in Modern Societies: A Cross-cultural Comparison among Seven Nations," *European Sociological Review* 6, no. 2 (1990): 103–124.

17. Sigrid Khera, "An Austrian Peasant Village under Rural Industrialization," *Behaviour Science Notes: Quarterly Bulletin* 7 (1972): 32.

18. Sonya Salamon, "Ethnic Differences in Farm Family Land Transfers," *Rural Sociology* 45, no. 2 (1980): 290–308. Idem, "Sibling Solidarity as an Operating Strategy in Illinois Agriculture," *Rural Sociology* 47, no. 2 (1982): 349–368. Idem, *Prairie Patrimony. Family, Farming, and Community in the Midwest* (Chapel Hill & London: The University of North Carolina Press, 1992), 119–197.

19. Martine Segalen, "'Avoir sa part': Sibling Relations in Partible Inheritance Brittany," in *Interest and Emotion: Essays on the Study of Family and Kinship*, ed. Hans Medick and David W. Sabean (Cambridge: Cambridge University Press, 1984), 130.

20. Rolande Bonnain, "Household Mind and the Ecology of the Central Pyrenees in the 19th Century: Fathers, Sons, and Collective Landed Property," *The History of the Family. An International Quarterly* 10 (2005): 249–270.

21. A.H. Crijns and F.W.J. Kriellaars, "Het traditionele patroon in de agrarische sector [The traditional pattern in the agricultural sector]," in *Geschiedenis van Noord-Brabant. Deel I. Traditie en modernisering. 1796-1890 [History of Noord-Brabant. Volume I. Tradition and modernization. 1796-1890]*, ed. H.F.J.M. van den Eerenbeemt (Amsterdam/Meppel: Boom, 1996), 206.

22. A.H. Crijns and F.W.J. Kriellaars, "Ontwikkeling en verandering in de agrarische sector [Development and change in the agricultural sector]," in *Geschiedenis van Noord-Brabant. Deel II. Emancipatie en industrialisering. 1890-1945 [History of Noord-Brabant. Volume II. Emancipation and industrialization. 1890-1945]*, ed. H.F.J.M. van den Eerenbeemt (Amsterdam/Meppel: Boom, 1996). Crijns and Kriellaars, "Het traditionele patroon [The traditional pattern]," 169-70, 191, 195, 198, 200, 208.

23. Five regional variants of the West-European marriage pattern have been distinguished in the Netherlands. The areas under study comprise three of them. Figures 2 and 3 are based on provincial figures and thus comprise larger regions than the study areas. The proportion of married men in the age category of 25 to 29 in Figure 2 approximates regional opportunities to marry early. The shares of unmarried men between 40 and 44 in Figure 3 indicate regional differences in celibacy. E.W. Hofstee, *Korte demografische geschiedenis van Nederland van 1800 tot heden [Short demographic history of the Netherlands 1800 - present]* (Haarlem: Fibula-Van Dishoeck, 1981), 13–27.

24. Jan Kok, "Bevolkingsgroei, gezondheid en gezin. Van achterblijver tot koploper," in *Geschiedenis van Holland [History of Holland] vol. III*, ed. Thimo de Nijs and Eelco Beukers (Hilversum: Verloren, 2003), 31.

25. Hofstee, *Korte demografische geschiedenis [Short demographic history]*, 21, 27.

26. Theo Engelen and Paul Klep, "Bevolking: van huwelijks- naar geboortenbeperking [Population: from marriage to birth control]," in *Geschiedenis van Noord-Brabant. Deel II. Emancipatie en industrialisering [History of Noord-Brabant. Volume II. Emancipation and industrialization]. 1890-1945*, ed. H.F.J.M. van den Eerenbeemt (Amsterdam/Meppel: Boom, 1996), 31.

27. J.A. Verduin, "Het gezin in demografisch perspectief [The family in demographic perspective]," in *Gezinsgeschiedenis: vier eeuwen gezin in Nederland [Family history: four centuries of family in the Netherlands]* ed. G.A. Kooy (Assen: Van Gorcum, 1985), 77.

28. Verduin, "Het gezin in demografisch perspectief [The family in demographic perspective]," 90–1.

29. *Uitkomsten van het onderzoek naar den toestand van den landbouw in Nederland, ingesteld door de landbouwcommissie, benoemd bij KB van 18 september 1886, nr. 28 [Results from a study of the situation of agriculture in the Netherlands, commissioned by Royal Decree of 18 September 1886, nr. 28]* ('s-Gravenhage: Gebrs. Langenhuysen 1890), XXXVII-10.

30. This was shown in a study on farmers and inheritance in the villages of Akersloot and Oudorp (situated about 20 kilometers to the west of Wormerland) between 1830 and 1880. Dirk Damsma and T. Zonneveld (1987), "Het verdeelde erf. Een onderzoek naar de wijze waarop de erfoverdracht plaats vond in de boerengemeenschap van de Noordhollandse gemeenten Akersloot en Oudorp tussen 1830 en 1880 [The divided yard. A study into the way property transmission took place among farmers in the Noord-Holland municipalities Akersloot and Oudorp between 1830 and 1880," in *Proceedings van het congres Balans en Perspectief [Proceedings of the conference Balance and Perspective]* (Utrecht, 1987), 626, 629–632.

31. Damsma and Zonneveld, "Het verdeelde erf [The divided yard]," 626, 630. Dirk Damsma and Jan Kok, "Ingedroogde harten? Partnerkeuze en sociale reproductie van de Noord-Hollandse boerenstand in de negentiende en vroeg-twintigste eeuw [Dried up hearts? Partner choice and social reproduction of the Noord-Holland farming class in the nineteenth and early-twentieth

century]," in *Genegenheid en gelegenheid: twee eeuwen partnerkeuze en huwelijk [Affection and Opportunity: Two Centuries of Partner Choice and Marriage]* ed. Jan Kok and Marco H.D. van Leeuwen (Amsterdam: Aksant, 2005), 301–2.

32. *Uitkomsten [Results]*, 12.

33. J. Best, "Boerenerfrecht in Overijssel [Farmers' Inheritance in Overijssel]," *Volk en Bodem. Maandblad voor volkspolitiek, volkscultuur en agrarisch leven [Nation and Soil. Monthly Magazine for National Politics, National Culture and Agricultural Life]* (1941): 265–266.

34. Best, "Boerenerfrecht in Overijssel [Farmers' Inheritance in Overijssel]," 270.

35. In 1941, it was still normal that, even when parents didn't have a testament, the farm was not divided. Best, "Boerenerfrecht in Overijssel [Farmers' Inheritance in Overijssel]," 267.

36. *Uitkomsten LXXVII [Results LXXVII]*, 7, 15.

37. L. Deckers, *De landbouwers van den Noordbrabantschen zandgrond. Eene bijdrage tot de kennis der maatschappelijke en oeconomische ontwikkeling van de Nederlandschen boerenstand in de negentiende en twintigste eeuw [The Farmers of the Noord-Brabant Sandy Soil. A Contribution to the Knowledge of the Societal and Economic Development of the Dutch Farming Class in the Nineteenth and Twentieth Century]*, 155 (Eindhoven: Vervoort, 1912).

38. J. Baert, "Deling van grond bij boerennalatenschap [Division of the Land at Farmers' Inheritance]," *De Pacht. Maandblad van de Nederlandse Pachtraad [The Rent. Monthly magazine of the Dutch Rent Council]* 9, no. 5 (1949): 50.

39. Wellman and Wortley, "Different Strokes from Different Folks," 582.

40. Glen H. Elder Jr., *Children of the Great Depression. Social Change in Life Experience* (Boulder: Westview Press 1999 [1974]).

41. Colleen L. Johnson, "Sibling Solidarity: Its Origin and Functioning in Italian-American Families," *Journal of Marriage and the Family* 44, no. 1 (1982): 155–67. G.A. Kooy, *De oude samenwoning op het nieuwe platteland: een studie over de familiehuishouding in de agrarische Achterhoek [The old pattern of coresidence in the new countryside: a study about the family household in the agrarian Achterhoek]* (Assen: Van Gorcum, 1959), 25. Max Weber, *The Protestant Ethic and the Spirit of Capitalism* (London etc.: Routledge, 2001 [1920]). Bradley J. Strahan, Does Religion Support Family Relationships?: It Depends on What Kind of Religion" (paper presented at the Australian Family Research Conference, Brisbane, 1996).

42. Kristin Y. Mack, "The Effects of Early Parental Death on Sibling Relationships in Later Life," *Omega* 49, no. 2 (2004): 131–148.

43. Christian Smith and Philip Kim, "Family Religious Involvement and the Quality of Family Relationships for Early Adolescents. A Research Report of The National Study of Youth and Religion," Number 4 (Chapel Hill: National Study of Youth and Religion, 2003).

44. Ellen Verbakel and Paul M. De Graaf, "Contacten tussen broers en zussen: traditionaliteit, homogeniteit en restricties [Contacts Between Siblings: Traditionalism, Homogeneity, and Restrictions]," *Mens & Maatschappij [Man & Society]* 79, no. 4 (2004): 389–410.

45. James H.S. Bossard and E.S. Boll, *The Large Family System. An Original Study in the Sociology of Family Behavior* (Philadelphia: University of Pennsylvania Press, 1956).

46. P.F. Lazarsfeld and R.K. Merton, "Friendship as Social Process: a Substantive and Methodological Analysis," in *Freedom and Control in Modern Society*, ed. M. Berger, T. Abel and C.H. Page (New York: Van Nostrand, 1954), 18–66.

47. Victor G. Cicirelli, "Sibling Relationships in Cross-Cultural Perspective," *Journal of Marriage and the Family* 56, no.1 (1994): 14.

48. Marieke Voorpostel, *Sibling support. The exchange of help among brothers and sisters in the Netherlands* (Utrecht: ICS dissertation, 2007), 40.

49. Lynn K. White and Agnes Riedmann, "When the Brady Bunch Grows Up: Step/Half – and Fullsibling Relationships in Adulthood," *Journal of Marriage and the Family* 54 (1992): 197–208.

50. It should be noted however that in our time, contact could also easily be maintained over longer distances, either by telephone or by Internet. Sonia Miner and Peter Uhlenberg, "Intragenerational Proximity and the Social Role of Siblings after Midlife," *Family Relations* 46, no. 2 (1997): 145–53.

51. C.P.M. Knipscheer, J. de Jong Gierveld, T.G. van Tilburg, P.A. Dykstra, ed. *Living Arrangements and Social Networks of Older Adults* (Amsterdam: VU University Press, 1995).

52. Theo van Tilburg, "Delineation of the Social Network and Differences in Network Size," in *Living Arrangements*, ed. Knipscheer et al., 83–96.

53. Marco H.D. van Leeuwen, Ineke Maas and Andrew Miles, *HISCO. Historical International Standard Classification of Occupations* (Leuven: Leuven University Press, 2002). Ineke Maas and Marco van Leeuwen, "Recode job from HISCO into HISCLASS," (unpublished SPSS syntax file, 2004).

54. Joop Hox, *Multilevel Analysis. Techniques and Applications* (Mahwah NJ: Lawrence Erlbaum Associates, 2002).

55. De Haan, *In the Shadow of Tree*, 83.

56. Sjoerd Beugelsdijk and Ton van Schaik, "Differences in Social Capital Between 54 Western European Regions," *Regional Studies: Journal of the Regional Studies Association* 39, no. 8 (2005): 1053–64.

57. We did not include religious background because of multicollinearity between region and the specific mixture of religions in the areas. We estimated separate models for Model 2 and 5 (results not included) in which we replaced region with religion, in order to find out whether the regional effects were in reality effects of religion. However, religious background does not have a significant effect on contact frequency between siblings. Moreover, the models including religion instead of region are not significant. Thus, although they might have played a part in it, regional differences cannot be equalized with religious differences.

58. Sjoerd Beugelsdijk and Ton van Schaik, "Social Capital and Regional Economic Growth," working paper faculty of Economics, Tilburg University (2003).

59. Monica Das Gupta, "Lifeboat Versus Corporate Ethic: Social and Demographic Implications of Stem and Joint Families," *Social Science & Medicine* 49 (1999): 173–84. Particularly with regard to the study of sibling relations a comprehensive cross-cultural approach, including Asian societies where interdependence among siblings is institutionalized in the life course, might produce intriguing results. T.S. Weisner, "Overview. Sibling Similarity and Difference in Different Cultures," in *Siblings in South Asia: Brothers and Sisters in Cultural Context* ed. Charles William Nuckolls (New York and London: Guilford Press, 1993), 1-15. P. G. Zukow, ed. *Sibling Interaction Across Cultures. Theoretical and Methodological Issues* (New York: Springer-Verlag, 1989). R.A. Nye, "Kinship, Male Bonds, and Masculinity in Comparative Perspective," *The American Historical Review* 105 (2000): 1–29.